

# Games?

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N.D.E.



# Games?

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## Resources:

Marc Prensky – <http://www.marcprensky.com>

Leadership in the 21<sup>st</sup> Century: The new Visionary Administrator Report –  
[http://www.blackboard.com/resources/k12/K12\\_NewVisionaryAdmin.pdf](http://www.blackboard.com/resources/k12/K12_NewVisionaryAdmin.pdf)

“Brisngr” online companion game – <http://www.alagaesia.com>

Children’s Internet Protection Act – <http://www.fcc.gov/cgb/consumerfacts/cipa.html>

“Stumbling Blocks”-Internet Filtering – Edutopia –  
<http://www.edutopia.org/web-2.0-tools-filtering-firewalls>

Second Life – <http://www.secondlife.com>

Game Creation Software – <http://www.ambrosine.com/resource.html>

Simulation games – <http://www.youdagames.com/>

“Simulation Nation” – Edutopia article – <http://www.edutopia.org/simulation-nation>

“The School of Second Life” – Edutopia article - <http://www.edutopia.org/school-second-life>

“The virtual Bacterial ID Lab” – Howard Hughes Medical Institute –  
[http://www.hhmi.org/biointeractive/vlabs/bacterial\\_id/index.html](http://www.hhmi.org/biointeractive/vlabs/bacterial_id/index.html)

“Video games start to shape classroom curriculum” – The Christian Science Monitor –  
<http://features.csmonitor.com/innovation/2008/09/18/video-games-start-to-shape-classroom-curriculum/>

WRT: Writer Response Theory: Games and Pedagogy –  
<http://writerresponsetheory.org/wordpress/projects/games-pedagogy/>

Games in Education Research - <http://research.microsoft.com/ur/us/gamesinstitute.aspx>

Florida Virtual School – <http://www.flvs.net>

Tabula Digita – <http://www.tabuladigita.com>

Scientific Learning – <http://www.scilearn.com>

NDE Games in Education – <http://www.nde.state.ne.us/techcen>

## Books-

“Playing to Learn” – by David Hutchinson, James Paul Gee  
[http://books.google.com/books?hl=en&id=pfLKz1a2GigC&dq=games+in+the+classroom&printsec=frontcover&source=bl&ots=gWSNQSOje1&sig=YLI6PMarTOigVq3U6tW49vfZqY&sa=X&oi=book\\_result&resnum=12&ct=result](http://books.google.com/books?hl=en&id=pfLKz1a2GigC&dq=games+in+the+classroom&printsec=frontcover&source=bl&ots=gWSNQSOje1&sig=YLI6PMarTOigVq3U6tW49vfZqY&sa=X&oi=book_result&resnum=12&ct=result)

# My Belief:

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# Game Deployment Issues

Issues	Solutions

# The **ISTE**

## National Educational Technology Standards (NETS•S) and Performance Indicators for Students

### 1. Creativity and Innovation

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students:

- a. apply existing knowledge to generate new ideas, products, or processes.
- b. create original works as a means of personal or group expression.
- c. use models and simulations to explore complex systems and issues.
- d. identify trends and forecast possibilities.

### 2. Communication and Collaboration

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:

- a. interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media.
- b. communicate information and ideas effectively to multiple audiences using a variety of media and formats.
- c. develop cultural understanding and global awareness by engaging with learners of other cultures.
- d. contribute to project teams to produce original works or solve problems.

### 3. Research and Information Fluency

Students apply digital tools to gather, evaluate, and use information. Students:

- a. plan strategies to guide inquiry.
- b. locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.
- c. evaluate and select information sources and digital tools based on the appropriateness to specific tasks.
- d. process data and report results.

### 4. Critical Thinking, Problem Solving, and Decision Making

Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. Students:

- a. identify and define authentic problems and significant questions for investigation.
- b. plan and manage activities to develop a solution or complete a project.
- c. collect and analyze data to identify solutions and/or make informed decisions.
- d. use multiple processes and diverse perspectives to explore alternative solutions.

### 5. Digital Citizenship

Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students:

- a. advocate and practice safe, legal, and responsible use of information and technology.
- b. exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.
- c. demonstrate personal responsibility for lifelong learning.
- d. exhibit leadership for digital citizenship.

### 6. Technology Operations and Concepts

Students demonstrate a sound understanding of technology concepts, systems, and operations. Students:

- a. understand and use technology systems.
- b. select and use applications effectively and productively.
- c. troubleshoot systems and applications.
- d. transfer current knowledge to learning of new technologies.



## NETS FOR TEACHERS 2008



### 1. Facilitate and Inspire Student Learning and Creativity

Teachers use their knowledge of subject matter, teaching and learning, and technology to facilitate experiences that advance student learning, creativity, and innovation in both face-to-face and virtual environments. Teachers:

- a. promote, support, and model creative and innovative thinking and inventiveness.
- b. engage students in exploring real-world issues and solving authentic problems using digital tools and resources.
- c. promote student reflection using collaborative tools to reveal and clarify students' conceptual understanding and thinking, planning, and creative processes.
- d. model collaborative knowledge construction by engaging in learning with students, colleagues, and others in face-to-face and virtual environments.

### 2. Design and Develop Digital-Age Learning Experiences and Assessments

Teachers design, develop, and evaluate authentic learning experiences and assessment incorporating contemporary tools and resources to maximize content learning in context and to develop the knowledge, skills, and attitudes identified in the NETS•S. Teachers:

- a. design or adapt relevant learning experiences that incorporate digital tools and resources to promote student learning and creativity.
- b. develop technology-enriched learning environments that enable all students to pursue their individual curiosities and become active participants in setting their own educational goals, managing their own learning, and assessing their own progress.
- c. customize and personalize learning activities to address students' diverse learning styles, working strategies, and abilities using digital tools and resources.
- d. provide students with multiple and varied formative and summative assessments aligned with content and technology standards and use resulting data to inform learning and teaching.

### 3. Model Digital-Age Work and Learning

Teachers exhibit knowledge, skills, and work processes representative of an innovative professional in a global and digital society. Teachers:

- a. demonstrate fluency in technology systems and the transfer of current knowledge to new technologies and situations.
- b. collaborate with students, peers, parents, and community members using digital tools and resources to support student success and innovation.

- c. communicate relevant information and ideas effectively to students, parents, and peers using a variety of digital-age media and formats.
- d. model and facilitate effective use of current and emerging digital tools to locate, analyze, evaluate, and use information resources to support research and learning.

#### **4. Promote and Model Digital Citizenship and Responsibility**

Teachers understand local and global societal issues and responsibilities in an evolving digital culture and exhibit legal and ethical behavior in their professional practices. Teachers:

- a. advocate, model, and teach safe, legal, and ethical use of digital information and technology, including respect for copyright, intellectual property, and the appropriate documentation of sources.
- b. address the diverse needs of all learners by using learner-centered strategies providing equitable access to appropriate digital tools and resources.
- c. promote and model digital etiquette and responsible social interactions related to the use of technology and information.
- d. develop and model cultural understanding and global awareness by engaging with colleagues and students of other cultures using digital-age communication and collaboration tools.

#### **5. Engage in Professional Growth and Leadership**

Teachers continuously improve their professional practice, model lifelong learning, and exhibit leadership in their school and professional community by promoting and demonstrating the effective use of digital tools and resources. Teachers:

- a. participate in local and global learning communities to explore creative applications of technology to improve student learning.
- b. exhibit leadership by demonstrating a vision of technology infusion, participating in shared decision making and community building, and developing the leadership and technology skills of others.
- c. evaluate and reflect on current research and professional practice on a regular basis to make effective use of existing and emerging digital tools and resources in support of student learning.
- d. contribute to the effectiveness, vitality, and self-renewal of the teaching profession and of their school and community.

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washingtonpost.com

## Studies: Video games can aid students, surgeons

By STEVE LeBLANC

The Associated Press

Monday, August 18, 2008; 3:07 PM

BOSTON -- Parents, don't put away those video games just yet \_ today's gamer may be tomorrow's top surgeon. Researchers who gathered in Boston for the American Psychological Association convention detailed a series of studies suggesting video games can be powerful learning tools \_ from increasing younger students' problem-solving potential to improving the suturing skills of laparoscopic surgeons.

One study even looked at whether playing "World of Warcraft," the world's biggest multiplayer online game, can improve scientific thinking.

The conclusion? Certain types of video games can have benefits beyond the virtual thrills of blowing up demons.

In one Fordham University study, 122 students in fifth, sixth and seventh grades were asked to think out loud for 20 minutes while playing a game they had never seen before. Researchers studied the children's statements to see if playing the game improved cognitive and perceptual skills.

While older children seemed more interested in just playing the game, younger children showed more interest in setting up a series of short-term goals needed to help them learn the game.

"The younger kids are focusing more on their planning and problem solving while they are actually playing the game, while adolescents are focusing less on their planning and strategizing and more on the here and now," said Fordham psychologist Fran Blumberg, who conducted the research last year and plans to submit it for publication. "They're thinking less strategically than the younger kids."

Studies by Iowa State University psychologist Douglas Gentile and Dr. James Rosser, head of minimally invasive surgery at Beth Israel Deaconess Medical Center in Boston, compared surgeons who play video games to those who don't.

The edge went to gamer surgeons, they found, even after taking into account differences in age, years of medical training and the number of laparoscopic surgeries performed. In laparoscopic procedures, surgeons use small incisions, thin surgical tools and video cameras to see inside the body.

One study of 33 laparoscopic surgeons found that those who played video games were 27 percent faster at advanced surgical procedures and made 37 percent fewer errors than those who didn't.

Advanced video game skills also were a good way to predict suturing abilities, according to their study,

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which was published in the Archives of Surgery in 2007.

Research Gentile and Rosser conducted for a second as yet unpublished study of 303 laparoscopic surgeons found those who played video games requiring spacial skills and hand dexterity performed better at those skills when tested later compared to surgeons who didn't play videos, Gentile said.

"The single best predictor of their skills is how much they had played video games in the past and how much they played now. Those were better predictors of surgical skills than years of training and number of surgeries performed," Gentile said. "So the first question you might ask your surgeon is how many of these (surgeries) have you done and the second question is 'Are you a gamer?'"

Some videos games even appear to sharpen scientific thinking skills.

Researchers at the University of Wisconsin at Madison looked at a random sample of 2,000 chat room posts about "World of Warcraft" to see what the players were discussing. The game is set in a fantasy world where players hunt, gather and battle to move their characters to higher levels. Players who work together succeed faster.

The research found the game encouraged scientific thinking, like using systems and models for understanding situations and using math and testing to investigate problems.

The vast majority of the discussion participants, 86 percent, shared knowledge to solve problems and more than half, 58 percent, used systematic and evaluative processes, researchers found.

The forums show that gamers are "creating an environment in which informal scientific reasoning practices are being learned," said Sean Duncan, a doctoral student who worked on the "World of Warcraft" report with lead author Constance Steinkuehler. The paper is set for publication in the Journal of Science Education and Technology.

The news wasn't all good.

Other studies confirmed earlier research that found students who played violent games tended to be more hostile, less forgiving and believed violence to be normal compared to those who played nonviolent games. And those who played more entertainment games did poorer in school and were are greater risk of obesity.

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On the Net:

American Psychological Association: <http://www.apa.org/>

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